

### REMARKS

Applicant elects, with traverse, Group II, comprising claims 1-6, 8, and 57-59.

Applicant's basis for the traversal is set forth below.

Claims 1-6, which comprises a portion of group (II) are directed to a prophylactic and/or therapeutic vaccine **against HIV**, comprising **Tat protein in its biologically active form**, as **claimed in claim 1**.

Group (I), directed to claims 1-7, 18-20, and 24, is directed to the vaccine **against HIV of group (II)**, comprising a nucleic acid sequence **encoding for the Tat protein**, as **claimed in claim 1, which is part of the same Group (II)**.

Group (III), directed to claims 1-6, 9, and 42, is directed to the vaccine **against HIV of group (II)**, comprising a nucleic acid sequence encoding for Tat mutants with the same characteristics of the **Tat protein as claimed in claim 1, which is a part of the same Group (II)**.

Group (IV), relating to claims 1-6, 10, and 43, is directed to the vaccine **against HIV of group (II)**, comprising amino acid sequences of mutants of the **Tat protein as claimed in claim 1, which is a part of the same group (II)**.

Group (V), relating to claims 1-6, 11, and 44, is directed to the vaccine **against HIV of group (II)**, comprising the particularly effective portions of the amino acid sequences of the **Tat protein, as claimed in claim 1, which is a part of the same group (II)**.

Group (VI), relating to claims 1-6 and 12, directed to the vaccine **against HIV of group (II) comprising the Tat protein, as claimed in claim 1, which is a part of the same group (II)**, conjugated to T-helper peptides.

Group (VII) relating to claims 1-6 and 13, directed to the vaccine **against HIV of group (II) comprising the Tat protein as claimed in claim 1, which is a part of the same group (II)**, in combination with Nef, Rev or Gag.

Group (VIII) relating to claims 1-6 and 14, directed to the vaccine **against HIV of group (II) comprising fusion proteins obtained by the Tat protein as claimed in claim 1, which is a part of the same group (II)**, fused with Nef, Rev, or Gag.

Group (IX) relating to claims 1-6, 15 and 16, directed to the vaccine against HIV of group (II) comprising the Tat protein as claimed in claim 1, which is a part of the same group (II), in combination with cytokines.

Group (X) relating to claims 1-6 and 17, directed to the vaccine against HIV of group (II) comprising fusion proteins obtained by the Tat protein as claimed in claim 1, which is a part of the same group (II) fused with: immuno-modulant cytokines, IL-12, IL-15.

Group (XI), relating to claims 1-6 and 21-24, directed to the vaccine against HIV of group (II) comprising vectors expressing both the Tat protein, as claimed in claim 1, which is a part of the same group (II) and cytokines.

Group (XII), relating to claims 1-6, 25, and 50, directed to the vaccine against HIV of group (II), comprising the Tat protein as claimed in claim 1, which is a part of the same group (II), in combination with autologous dendritic cells.

Group (XIII), relating to claims 1-6, 26, 27, and 60, directed to the vaccine against HIV of group (II) comprising the Tat protein as claimed in claim 1, which is a part of the same group (II) in combination with adjuvants.

Group (XIV), relating to claims 1-6 and 28-31, directed to the vaccine against HIV of group (II), comprising the Tat protein as claimed in claim 1, which is a part of the same group (II), in combination with delivery systems.

Group (XV), relating to claims 1-6 and 32, directed to the vaccine against HIV of group (II) comprising the Tat protein, as claimed in claim 1, which is a part of the same group (II), for immunizing peripheral blood cells.

Group (XVI), relating to claims 1-6 and 33, directed to the vaccine against HIV of group (II) comprising the Tat protein, as claimed in claim 1, which is a part of the same group (II), combined with inhibitors of viral replication.

Group (XVII), relating to claims 1-6, 34, 35, 39, and 40, directed to the vaccine against HIV of group (II) comprising the Tat protein as claimed in claim 1, which is a part of the same group (II) administered mucosally.

Group (XVIII), relating to claims 1-6 and 36-38, directed to the vaccine against HIV of group (II) comprising the Tat protein as claimed in claim 1, which is a part of the same group (II) administered systemically or locally.

Group (XIX), relating to claims 1 and 45-48, is directed to an expression vector constructed to express the Tat protein, as claimed in claim 1, which is a part of the same group (II).

Group (XX) relating to claims 1 and 61, directed to a method for treating AIDS with the Tat protein as claimed in claim 1, which is a part of the same group (II), in combination with paramagnetic beads coated with anti-CD3 and anti-CD28 monoclonal antibodies.

The claims in Group III-XX should be considered as specific applications of a more generalized inventive concept relating to the vaccination and corresponding therapeutic treatment for AIDS. The inventive concept is based on the fact that a specific form of a protein of HIV virus has been found proper for an effective vaccination, namely, Tat protein in its biologically active form and corresponding DNA encoding for it. Such biologically active Tat according to the invention has been proven to be effective against HIV in primates.

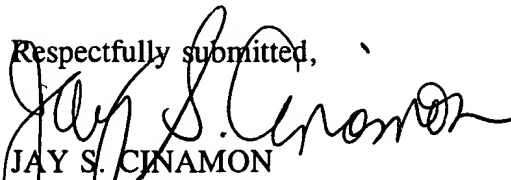
It follows from the foregoing that there is unity of invention between the specific application recited in the claims of Group (II) and the others claimed in the non-elected groups in the instant Office Action, as they are all preferred embodiments of the main aspect of the invention.

The Applicant expressly reserves the right to file one or more divisional applications directed to the non-elected groups.



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Respectfully submitted,

  
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